TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
MCT.0133US

In Re Application Of: **Scott A. Cluff et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/706,960	11-06-2000	Gabriel L. Chu	21906	2114	8488

Invention: **Recovering a System That Has Experienced a Fault**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on **March 10, 2005.**

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Dated: **May 10, 2005**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Scott A. Cluff et al.	§	Group Art Unit:	2114
Serial No.:	09/706,960	§	Examiner:	Gabriel L. Chu
Filed:	November 6, 2000	§		
For:	Recovering A System That Has Experienced A Fault	§	Atty. Dkt. No.:	MCT.0133US (MUEI-0548.00/US)

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

Sir:

The final rejection of claims 1-11, 14, 20, 28, and 30-33 is hereby appealed.

I. REAL PARTY IN INTEREST

The real party in interest is Micron Technology, Inc.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF THE CLAIMS

Claims 1-11, 14, 20, 28, and 30-33 have been finally rejected and are the subject of this appeal. Claims 12, 13, 15-19, 21-27, and 29 have been cancelled.

Date of Deposit: May 10, 2005

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IV. STATUS OF AMENDMENTS

The Advisory Action dated March 16, 2005 indicated that the amendment after final submitted on February 22, 2005, will be entered for purposes of appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(l)(v). Each element of the claims is identified by a corresponding reference to the specification.

Independent claim 1 recites a system comprising:

an interface to a network (Fig. 2:112; Specification, p. 5, lines 3-5);

a first operational element to perform one or more tasks in the system (Fig. 1:24; Specification, p. 3, line 28-p. 4, line 1);

a storage element containing a flag to indicate if a fault has occurred with the first operational element (Fig. 2:132; Specification, p. 6, lines 7-11); and

a backup device to enable access of the network through the interface in response to the flag indicating failure of the first operational element (Fig. 1:25; Specification, p. 6, lines 12-22).

Independent claim 14 recites a method (Fig. 3) of performing error recovery in a system, comprising:

detecting if an operating portion of the system has experienced a fault (Fig. 1:24; Specification, p. 6, lines 14-20);

accessing a backup device to enable communication through a network stack including an Internet Protocol (IP) layer (Specification, p. 5, lines 21-30) over a network (Fig. 1:25; Specification, p. 6, lines 20-22);

retrieving data through the network stack including the IP layer over the network, the data comprising an image containing user data and an operating system (Fig. 1:30, 32, 34; Specification, p. 6, lines 25-28);

recovering the system using the image (Specification, p. 6, lines 26-28; p. 3, lines 9-14); and

loading a backup software routine from the backup device (Specification, p. 6, lines 20-21),

wherein the backup software routine comprises a browser, the method further comprising executing the browser to access the network through the network stack including the IP layer to retrieve the data (Specification, p. 6, lines 21-22).

Independent claim 20 recites a method (Fig. 3) of performing recovery in a system having a main storage device (Fig. 1:24) and a backup storage device (Fig. 1:22), comprising:

booting from a backup storage device instead of the main storage device if the system has experienced a fault (Specification, p. 4, lines 4-12; p. 6, lines 16-21);

using the backup storage device to enable communications through a network stack including an Internet Protocol (IP) layer over a network to retrieve an image to recover the system, wherein the image comprises user data and an operating system (Specification, p. 6, lines 21-22); and

loading a routine from the backup storage device to enable the network communication through the network stack including the IP layer (Specification, p. 6, lines 21-22),

wherein loading the routine comprises loading a browser (Specification, p. 4, lines 20-27).

Independent claim 28 recites an article comprising at least one storage medium containing instructions that when executed (Fig. 3) cause a system to (Specification, p. 7, lines 1-14):

detect if an operating portion of the system has experienced a fault (Specification, p. 6, lines 16-20);

access a backup device to enable communication over a network (Specification, p. 6, lines 20-22);

retrieve data to recover the system over the network (Specification, p. 6, lines 25-28);

in response to the fault, scan a storage device to identify portions of the storage device that are defective (Specification, p. 6, lines 28-30);

store the retrieved data in portions of the storage device other than the portions that are identified to be defective by the scan (Specification, p. 6, lines 30-31),

wherein retrieving the data comprises retrieving an image containing user data and operating system software (Fig. 1:30, 32, 34; Specification, p. 3, lines 5-14);

set a flag in response to the fault, the flag to indicate that the system has experienced the fault (Specification, p. 6, lines 7-11);

load a BIOS routine to detect whether the flag is set (Specification, p. 6, lines 13-15); and

cause the BIOS routine to load a second routine in response to detecting the flag is set, the second routine to retrieve the data to recover the system over the network (Specification, p. 6, lines 16-21).

VI. GROUNDS OF REJECTION

A. Claims 1, 2, 4-7, 9-11, and 30-32 Were Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 5,713,024 (Halladay) in View of U.S. Patent No. 5,627,964 (Reynolds).

B. Claim 3 Was Rejected Under § 103 Over Halladay in View of Reynolds and "Introduction" from TCP/IP Illustrated, Volume 1 by W. Richard Stevens (Stevens).

C. Claim 8 Was Rejected Under § 103 Over Halladay in View of Reynolds and U.S. Patent No. 6,381,694 (Yen).

D. Claims 14 and 20 Were Rejected Under § 103 Over Halladay in View of Stevens.

E. Claims 28 and 33 Were Rejected Under § 103 Over Halladay in View of U.S. Patent No. 4,972,316 (Dixon) and Reynolds.

VII. ARGUMENT

A. Claims 1, 2, 9-11, and 30-32 Were Rejected Under 35 U.S.C. § 103 Over U.S. Patent No. 5,713,024 (Halladay) in View of U.S. Patent No. 5,627,964 (Reynolds).

1. Claims 1, 2, 9-11, and 30-31.

Claims 1, 2, 9-11, and 30-31 were finally rejected as being obvious over Halladay and Reynolds.

Appellant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 1 over Halladay in view of Reynolds. To establish a *prima facie* case of obviousness, at least the following criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and (2) the prior art references when combined must teach or suggest all the claim limitations. M.P.E.P. § 2143 (8th ed., Rev. 2), at 2100-129. Here, the Examiner has failed to establish either requirement of a *prima facie* case of obviousness.

As conceded by the Examiner, Halladay does not disclose a storage element containing a flag to indicate if a fault has occurred with a first operational element. 12/23/2004 Office Action at 4. However, the Examiner cited Reynolds as teaching such a storage element for storing a flag. The *prima facie* case of obviousness fails for the reason that there existed no motivation or suggestion to combine the teachings of Halladay and Reynolds. Halladay specifically teaches the use of a floppy disk that is specially formatted for "cold" booting a computer in response to memory failure. Halladay, 7:57-8:19. According to Halladay, a user initiates a cold boot process by loading the cold boot floppy disk into the floppy drive of the computer system. Halladay, 8:22-28. This causes a cold boot application program to be loaded for execution for performing the restoring of data onto the hard drive. However, note that Halladay specifically

teaches that a user must load the floppy disk to start the cold boot process. There is absolutely *no need or desirability* to store a special flag in Halladay, as loading the floppy disk itself is the act for starting the restoring process in Halladay.

In other words, there existed absolutely no suggestion of any desirability to incorporate, into Halladay, the storage of a special flag to indicate if a fault has occurred with a first operational element, in combination with using the special flag to cause a backup device to enable access of a network through an interface. It is well established law that "[t]he mere fact that the prior art could be so modified would not have made the modification **obvious** unless the prior art suggested the **desirability** of the modification." *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125 (Fed. Cir. 1984) (emphasis added). As the Federal Circuit has stated, "virtually all [inventions] are combinations of old elements." *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). "Most, if not all, inventions are combinations and mostly of old elements." *Id.*

> Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.'

Id.

In view of the fact that there existed absolutely no reason or need to incorporate a flag for indicating a fault in the Halladay system, it is respectfully submitted that the only basis for the assertion by the Examiner that it would have been obvious to use such a flag in the Halladay system is based on impermissible hindsight. Without the teachings of the disclosure of the present invention, a person of ordinary skill in the art looking to the teachings of Halladay would

not have been motivated to incorporate a flag for indicating a fault, since Halladay requires that a user initiates the cold boot process described in Halladay by loading a specially formatted floppy disk. There would have been no reason whatsoever to use any type of flag for indicating if a fault has occurred, including the flag described in Reynolds, in the system of Halladay. Therefore, there existed no motivation or suggestion to combine Reynolds with Halladay in the manner proposed by the Examiner.

Moreover, a person of ordinary skill in the art looking to the teachings of Reynolds would not have been motivated to incorporate the fail-safe identifying flag of Reynolds into the system of Halladay. Reynolds is concerned about entering a fail-safe mode based on the special flag. Reynolds clearly is not concerned about *restoring* data from a backup device in response to this special flag. Instead, Reynolds teaches entry of a fail-safe mode in response to a failure, where a reduced set of graphical features are provided in fail-safe mode. Reynolds, 3:31-55. Thus, Reynolds provided no suggestion to modify the system of Halladay to start a backup process in response to a special flag to identify that a fault has occurred with an operational element. The foregoing establishes that no motivation or suggestion existed to combine the teachings of Halladay and Reynolds to achieve the claimed invention – therefore, a *prima facie* case of obviousness has not been established.

A further reason that a prima facie case of obviousness has not been established with respect to claim 1 is that even if Halladay and Reynolds can be properly combined, the hypothetical combination of the references does not teach or suggest each and every element of claim 1. Note that the flag recited in claim 1 is specific: it is a flag to indicate if a fault has occurred with the first operational element, *and* a backup device enables access of the network through the interface *in response to the flag indicating failure of the first operational element.*

Thus, the flag cannot just be any flag that indicates that a fault has occurred – the flag has to indicate if a fault has occurred, *and* a backup device has to be responsive to *the flag* indicating failure to enable access of a network. Reynolds teaches a special flag that indicates whether fail-safe mode is to be established in response to a previous failure. Reynolds, 6:28-31. However, the special flag of Reynolds is *not* used to cause a backup device to enable access of a network. Rather, the special flag of Reynolds causes entry of the fail-safe mode where reduced graphical capabilities are available. Thus, even if Halladay and Reynolds can be properly combined, the hypothetical combination of Halladay and Reynolds does not teach or suggest all elements of claim 1. Therefore, a *prima facie* case of obviousness of claim 1 over Halladay and Reynolds has not been established for this additional reason.

For the foregoing reasons, it is respectfully requested that the final rejection of the above claims be reversed.

2. Claim 4.

Claim 4 depends from claim 1 and is thus allowable for at least the same reasons as claim 1.

Moreover, with respect to claim 4, neither Halladay nor Reynolds teaches a backup routine comprising a browser that has been adapted to perform communications through a network stack including an IP layer. The Examiner cited a passage that starts in column 5, at line 3, of Halladay as teaching this browser. 12/23/2004 Office Action at 5. The passage refers to a user accessing cold boot data backup system 10 via a standard application program activation process native to a computer system. There is no indication whatsoever in this passage of a browser. A person of ordinary skill in the art would understand the term "browser" means a Web browser, which is a software application used to locate and display Web pages. The

"standard application program activation process native to computer system 1" referred to in the column 5 passage cited by the Examiner does not refer to a web browser. Therefore, because Halladay and Reynolds fails to disclose or suggest another express element of claim 4, it is respectfully submitted that the *prima facie* case of obviousness is defective for this additional reason.

For the foregoing reasons, it is respectfully requested that the final rejection of the above claim be reversed.

3. Claims 5-7, and 32.

Claims 5-7 and 32 depend from claim 3, which in turn depends from claim 1. Therefore, claims 5-7 and 32 are allowable for at least the same reasons as claim 1.

Also, claims 5-7 and 32 depend from claim 3, and thus incorporate the subject matter of claim 3. Claim 3 recites that the interface in the system comprises a network stack having an IP layer. There is no teaching of an IP layer in either Halladay or Reynolds. In fact, the Examiner conceded that Halladay and Reynolds does not disclose an interface comprising a network stack having an IP layer. 12/23/2004 Office Action at 11.

The rejection of claims 5-7 is therefore defective. Reversal of the final rejection of the above claims is respectfully requested.

B. Claim 3 Was Rejected Under § 103 Over Halladay in View of Reynolds and "Introduction" from TCP/IP Illustrated, Volume 1 by W. Richard Stevens (Stevens).

1. Claim 3.

Claim 3 was rejected as being obvious over Halladay in view of Reynolds and Stevens.

In view of the fact that the obviousness rejection of base claim 1 over Halladay and Reynolds is defective, it is respectfully submitted that the rejection of claim 3, which depends from claim 1, over Halladay, Reynolds, and Stevens, is also defective.

Moreover, with respect to claim 3, the Examiner conceded that Halladay and Reynolds does not disclose the subject matter of claim 3, which recites the interface comprising a network stack having an IP layer, where the backup device comprises a backup storage element containing a backup routine adapted to perform communications through the network stack including the IP layer to the network.

The Examiner argued that although Halladay and Reynolds do not disclose such an interface, that nevertheless using IP and networking "is extremely well known in the art." 12/23/2004 Office Action at 11. The Examiner relied upon the teachings of Stevens regarding the TCP/IP protocol suite as providing the teachings that would motivate a person of ordinary skill in the art to modify Halladay and Reynolds to achieve the claimed invention. 12/23/2004 Office Action at 11-12.

Appellant respectfully disagrees with this assessment. Although Stevens teaches that a TCP/IP protocol suite can be used for the Internet, there is no suggestion in Stevens that Halladay and Reynolds can be modified to incorporate an interface having an IP layer. Again, the only basis for the incorporation of the teachings of Stevens into Halladay and Reynolds is based on impermissible hindsight that uses the benefit of the disclosure of the present invention. Therefore, it is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claim 3 for this additional reason.

Reversal of the final rejection of the above claim is respectfully requested.

C. Claim 8 Was Rejected Under § 103 Over Halladay in View of Reynolds and U.S. Patent No. 6,381,694 (Yen).

1. Claim 8.

Claim 8 depends from claim 1, and is thus allowable for at least the same reasons as claim 1. Claim 8 was rejected as being obvious over Halladay, Reynolds, and Yen. In view of the fact that the obviousness rejection of base claim 1 over Halladay and Reynolds is defective, it is respectfully submitted that the rejection of claim 8 over Halladay, Reynolds, and Yen is also defective.

Therefore, reversal of the final rejection of claim 8 is respectfully requested.

D. Claims 14 and 20 Were Rejected Under § 103 Over Halladay in View of Stevens.

1. Claim 14.

Independent claim 14 was rejected as being obvious over Halladay and Stevens. Claim 14 recites that the backup software routine comprises a browser, where the browser is executed to access the network through a network stack including an IP layer to retrieve data comprising an image containing user data in an operating system. The Examiner cited to a passage starting in column 8, at line 45, of Halladay as teaching this feature of claim 14. 12/23/2004 Office Action at 15. This cited passage in Halladay refers to a cold boot application program that initiates a hard drive restore process and that instructs the user to load a backup media into a backup drive. However, there is no mention whatsoever in this passage of Halladay, or anywhere else in Halladay, or in the teachings of Stevens, of a browser that is executed to load data containing an image having user data in an operating system. As discussed above, the term "browser" refers to a "Web browser," which is a software application used to locate and display web pages. There is no teaching whatsoever of this feature in Halladay or Stevens.

Therefore, because the hypothetical combination of Halladay and Stevens does not teach or suggest all elements of the claim, a *prima facie* case of obviousness has not been established with respect to claim 14 over Halladay and Stevens.

In view of the foregoing, it is respectfully requested that the final rejection of the above claim be reversed.

2. Claim 20.

Claim 20 was also rejected as being obvious over Halladay and Stevens.

Claim 20 recites the loading of a browser from a backup storage device to enable network communication through a network stack including IP layer for retrieving an image to recover a system, where the image comprises user data in an operating system. The hypothetical combination of Halladay and Stevens fails to disclose or suggest this subject matter. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 20 over Halladay and Stevens.

In view of the foregoing, it is respectfully requested that the final rejection of the above claim be reversed.

E. Claims 28 and 33 Were Rejected Under § 103 Over Halladay in View of U.S. Patent No. 4,972,316 (Dixon) and Reynolds.

1. Claims 28 and 33.

Claim 28 was rejected as being obvious over the asserted combination of Halladay, Dixon, and Reynolds. As conceded by the Examiner, Halladay and Dixon do not disclose the following elements of claim 28: setting a flag in response to a fault, loading a BIOS routine to detect whether the flag is set, and causing the BIOS routine to load a second routine in response to detecting the flag is set. 12/23/2004 Office Action at 26. The Examiner relied upon Reynolds

as teaching the missing elements. However, as discussed above, Reynolds teaches setting a special flag to determine whether to enter a fail-safe mode. The special flag is clearly not used for causing the loading of a second routine to retrieve data to recover the system over a network. Thus, a *prima facie* case of obviousness cannot be established with respect to claim 28 because the hypothetical combination of Halladay, Dixon, and Reynolds does not teach or suggest all elements of the claim. Moreover, in view of the fact that there existed no motivation or suggestion to combine Halladay and Reynolds (see arguments with respect to claim 1), no motivation or suggestion existed to combine Halladay, Dixon, and Reynolds. Therefore, withdrawal of the obviousness rejection of claim 28 is respectfully requested.

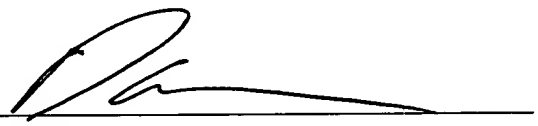
Withdrawal of the final rejection of claims 28 and 33 is therefore respectfully requested.

VIII. CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: 5-10-2005



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APPENDIX OF CLAIMS

The claims on appeal are:

1. A system comprising:

an interface to a network;

a first operational element to perform one or more tasks in the system;

a storage element containing a flag to indicate if a fault has occurred with the first operational element; and

a backup device to enable access of the network through the interface in response to the flag indicating failure of the first operational element.

2. The system of claim 1, wherein the first operational element comprises a disk drive.

3. The system of claim 1, wherein the interface comprises a network stack having an Internet Protocol (IP) layer, wherein the backup device comprises a backup storage element containing a backup routine adapted to perform communications through the network stack including the IP layer to the network.

4. The system of claim 3, wherein the backup routine comprises a browser.

5. The system of claim 3, wherein the first operational element comprises a first disk drive, and wherein the backup storage element comprises a second disk drive separate from the first disk drive.

6. The system of claim 5, wherein the second disk drive has a smaller storage capacity than the first disk drive.

7. The system of claim 3, wherein the backup storage element comprises non-volatile memory.

8. The system of claim 1, wherein the first operational element comprises a disk drive having plural partitions, and wherein the backup device comprises one of the partitions.

9. The system of claim 1, wherein the backup device comprises a removable disk drive.

10. The system of claim 1, the backup device to retrieve user data and software over the network to recover the system.

11. The system of claim 1, wherein the first operational element comprises a storage element, the backup device to retrieve an image of the storage element to recover the storage element to its operational state.

14. A method of performing error recovery in a system, comprising:

detecting if an operating portion of the system has experienced a fault;

accessing a backup device to enable communication through a network stack including an Internet Protocol (IP) layer over a network;

retrieving data through the network stack including the IP layer over the network, the data comprising an image containing user data and an operating system;

recovering the system using the image; and

loading a backup software routine from the backup device,

wherein the backup software routine comprises a browser, the method further comprising executing the browser to access the network through the network stack including the IP layer to retrieve the data.

20. A method of performing recovery in a system having a main storage device and a backup storage device, comprising:

booting from a backup storage device instead of the main storage device if the system has experienced a fault;

using the backup storage device to enable communications through a network stack including an Internet Protocol (IP) layer over a network to retrieve an image to recover the system, wherein the image comprises user data and an operating system; and

loading a routine from the backup storage device to enable the network communication through the network stack including the IP layer,

wherein loading the routine comprises loading a browser.

28. An article comprising at least one storage medium containing instructions that when executed cause a system to:

detect if an operating portion of the system has experienced a fault;

access a backup device to enable communication over a network;

retrieve data to recover the system over the network;

in response to the fault, scan a storage device to identify portions of the storage device that are defective;

store the retrieved data in portions of the storage device other than the portions that are identified to be defective by the scan,

wherein retrieving the data comprises retrieving an image containing user data and operating system software;

set a flag in response to the fault, the flag to indicate that the system has experienced the fault;

load a BIOS routine to detect whether the flag is set; and

cause the BIOS routine to load a second routine in response to detecting the flag is set, the second routine to retrieve the data to recover the system over the network.

30. The system of claim 1, further comprising a BIOS routine to detect a state of the flag, the BIOS routine to access the backup device in response to detecting that the flag indicates the fault.

31. The system of claim 10, wherein the software comprises operating system software.

32. The system of claim 3, wherein the backup device is adapted to retrieve an image containing user data and operating system software over the network in response to the flag.

33. The article of claim 28, wherein storing the retrieved data comprises storing the retrieved image containing the user data and operating system software in the portions of the storage device other than the portions that are identified to be defective by the scan.